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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/322,444	05/28/1999	MORIIHIKO MINOWA	FUJO-16.155	8016
26304	7590	01/11/2006	EXAMINER	
KATTEN MUCHIN ROSENMAN LLP			HO, DUC CHI	
575 MADISON AVENUE			ART UNIT	
NEW YORK, NY 10022-2585			PAPER NUMBER	
			2665	

DATE MAILED: 01/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/322,444	Applicant(s) MINOWA ET AL.	
	Examiner Duc C. Ho	Art Unit 2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4-15 is/are allowed.
- 6) ☒ Claim(s) 1,3 and 18-20 is/are rejected.
- 7) ☒ Claim(s) 2, 16 and 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Objections

1. Claim 20 is objected to because of the following informalities: The term “modulating” on line 6 should be changed to “demodulating” to fit with the function of despread demodulators.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102(e) that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3. The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1, 18-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Sunaga (U.S. 6,381,233).

Regarding claim 19, Sunaga discloses spread spectrum communication transmitter and receiver, and CDMA mobile communication system and method.

a plurality of despread demodulator, which are respectively arranged for the plurality of channels, for demodulating a spread signal transmitted over a corresponding channel by despreding the spread signal with a corresponding spread code (a plurality of despreaders 9-10, fig. 2, see col. 1-line 65 to col. 2-line 24); and

instructing means (the path detector 11-fig. 2 includes information including timing, phase for performing the despreding process on each received signal of traffic channels, see col. 3, lines 10-43) for instructing a phase of each spread code used for despreding each of the spread signals transmitted over the plurality of channels, wherein

the instructing means is shared by the plurality of despread demodulators (wherein the path detector is shared by the plurality of despreaders 9-10, fig. 2).

Regarding claim 20, Sunaga discloses spread spectrum communication transmitter and receiver, and CDMA mobile communication system and method.

a path detector being used in a time-division manner so as to generate timing signals for the plurality of channels according to correlations between received spread signals and spread code (a path detector 11-fig.2 inherently used in a time-division manner to provide timing signals to perform the dispreding processes of the traffic channels, see col. 3, lines 10-43); and

a plurality of despread demodulators demodulating the plurality of channels, wherein a despread demodulator demodulates each received spread signal according to a corresponding timing signal among the timing signals generated by the path

detector (the desreader 9, and 10 demodulating traffic channel at the timing informed by the path detector 11-fig. 2).

Regarding claims 1, and 18, these claims have similar limitations as claim 20. Therefore, they are rejected under Sunaga for the same reasons set forth in the rejection of claim 20.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

7. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sunaga, in view of Watanabe (US 6,307,850).

Regarding claim 3, Sunaga discloses all claimed limitations, except

a spread signal transmitted over each of the plurality of channels (1) includes pilot signals inserted at predetermined intervals; and

said path detector generates the timing signal (2) by using the pilot signals for each of the plurality of channels.

Watanabe discloses a CDMA transmission system in which the pilot signal is inserted into the transmission data series at regular intervals.

Referring to figure 8, in this transmission apparatus, the pilot signal is inserted into the transmission signal data series at regular intervals by the switch 86, column 1, lines 47-51(corresponding to (1)).

Referring to figure 7, in this CDMA receiving apparatus, the correlators 632, 634, and 636 despread the reception signals output from the reception RF section 62 on the basis of the spread codes generated by the spread code generators 652, 654, and 656 to thereby demodulate a pilot signal transmitted through the respective channels, column 6, lines 7-21(corresponding to (2)).

It would have been obvious to one of ordinary skill in the art, at the time invention was made, to employ a switch for inserting pilot signal into the transmitted data at regular intervals at a transmission apparatus, and to demodulate the pilot signal transmitted through the respective channels at a receiving apparatus as taught by Watanabe into the system of Sunaga, in order to solve the problem in such coherent detection, in which the transmission side transmit a pilot signal contained in transmission data to the reception side so that the reception side estimates the condition of line on the basis of the results of the reception of the pilot signal and corrects the distortion of the transmission signal due to fading.

Allowable Subject Matter

8. Claims 4-15 are allowed.
9. Claims 2, and 16-17 are objected to as being independent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duc Ho whose telephone number is (571) 272-3147. The examiner can normally be reached on Monday through Friday from 7:00 am to 3:30 pm.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu, can be reached on (571) 272-3155.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-2600.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2665

11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patent Examiner

A handwritten signature in black ink, appearing to read 'Duc Ho', written in a cursive style.

Duc Ho

1-05-06